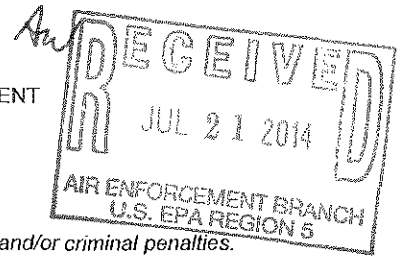


MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT
AIR QUALITY DIVISION

**RENEWABLE OPERATING PERMIT
REPORT CERTIFICATION**

Authorized by 1994 P.A. 451, as amended. Failure to provide this information may result in civil and/or criminal penalties.



Reports submitted pursuant to R 336.1213 (Rule 213), subrules (3)(c) and/or (4)(c), of Michigan's Renewable Operating Permit (ROP) program must be certified by a responsible official. Additional information regarding the reports and documentation listed below must be kept on file for at least 5 years, as specified in Rule 213(3)(b)(ii), and be made available to the Department of Natural Resources and Environment, Air Quality Division upon request.

Source Name Marathon Petroleum Company LP County Wayne

Source Address 1300 South Fort Street City Detroit

AQD Source ID (SRN) A9831 ROP No. MI-ROP-A9831-2012b ROP Section No. 01

Please check the appropriate box(es):

☐ **Annual Compliance Certification (Pursuant to Rule 213(4)(c))**

Reporting period (provide inclusive dates): From _____ To _____

- ☐ 1. During the entire reporting period, this source was in compliance with ALL terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the ROP.
- ☐ 2. During the entire reporting period this source was in compliance with all terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference, **EXCEPT** for the deviations identified on the enclosed deviation report(s). The method used to determine compliance for each term and condition is the method specified in the ROP, unless otherwise indicated and described on the enclosed deviation report(s).

☐ **Semi-Annual (or More Frequent) Report Certification (Pursuant to Rule 213(3)(c))**

Reporting period (provide inclusive dates): From _____ To _____

- ☐ 1. During the entire reporting period, ALL monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred.
- ☐ 2. During the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred, **EXCEPT** for the deviations identified on the enclosed deviation report(s).

☒ **Other Report Certification**

Reporting period (provide inclusive dates): From 1/1/2014 To 6/30/2014

Additional monitoring reports or other applicable documents required by the ROP are attached as described:

Revised Consent Decree Progress Report - January 1 - June 30, 2014

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete

**MPC Investment LLC,
its General Partner
Deputy Assistant Secretary**

C.T. Case

Name of Responsible Official (print or type)

Title

313-843-9100

Phone Number

C.T. Case
Signature of Responsible Official

7/18/14
Date



Michigan Refining Division

FED EX GROUND

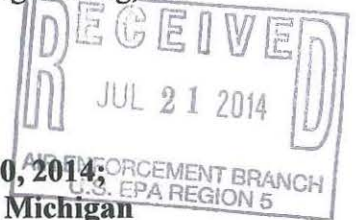
Marathon Petroleum Company LP

July 17, 2014

1300 South Fort Street
Detroit, MI 48217
Tel: 313.843.9100

Chief Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
ENRD Mailroom, Room 2121
601 D. Street, NW
Washington, DC 20530

Director, Air Enforcement Division
U.S. Environmental Protection Agency
c/o Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932



**RE: First Revised Consent Decree Progress Report – January 1 – June 30, 2014;
Marathon Petroleum Company LP, Michigan Refining Division, Detroit, Michigan**

Dear Sir or Madam:

Pursuant to Paragraph 33 of the November 2005 First Revised Consent Decree, United States of America et. al. v. Marathon Ashland Petroleum LLC (presently known as Marathon Petroleum Company LP) (Civil Action No. 4:01CV-40119-PVG), as modified on March 31, 2008 and June 30, 2010, MPC is submitting this semi-annual progress report for the time period January 1 through June 30, 2014. In order to meet the reporting requirements outlined in Paragraph 33 of the Consent Decree, each subject area is described in the following attachments:

- Attachment 1 - Affirmative Relief/Environmental Projects (Measures) implementation progress report.
- Attachment 2 - Summary of Appendix R Emissions
- Attachment 3 – Identification of Emission Limit Exceedances
- Attachment 4 - Description of any problems anticipated with respect to meeting the requirements of this Consent Decree
- Attachment 5 - Description of all environmentally beneficial projects and SEP implementation activity in accordance with the Consent Decree
- Attachment 6 – Any additional matters MPC believes should be brought to the attention of the United States or U.S. EPA – none.
- Attachment 7 – Hydrocarbon and Acid Gas Incident Status Report

Should you have any questions or require additional information please contact Kay Bedenis at (313) 297-6289.


CERTIFICATION –

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information in Attachments 1 through 7 of this submittal is, to the best of my knowledge and belief, true, accurate, and complete.

Sincerely,

Marathon Petroleum Company LP

By: MPC Investment LLC, General Partner



Mr. E. T. Case, Deputy Assistant Secretary

Attachments (7)

Cc: Air and Radiation Division
U.S. EPA, Region 5

Office of Regional Counsel
U.S. EPA, Region 5

Ms. Wilhemina McLemore
Michigan Department of Environmental Quality
Air Quality Division

Via e-mail: Mr. John H. Gray (MPC), Mr. James R. Wilkins (MPC), Ms. Virginia King (MPC), Ms. Clare Sullivan, Matrix Engineering; Mr. John Fogarty, U.S. EPA; Mr. Patrick Foley, U.S. EPA; Michele Jencius, U.S. EPA

Attachment 1

Affirmative Relief/Environmental Projects (Measures)
Implementation Progress Report

The following table provides a status report on First Revised Consent Decree activities or tasks having a deadline occurring between January 1 and June 30, 2014. The citations refer to the paragraph numbers (all in Section V) of the Consent Decree (CD). All items were completed as required during this reporting period.

- 12A In accordance with discussions between MPC and U.S. EPA, the schedule for the low oxides of nitrogen (NOx) combustion promoter (COP) and NOx-reducing catalyst additives has been revised several times. The 18-month catalyst trial period ended on March 31, 2006.
- 12B MPC did not add conventional combustion promoter during the reporting period.
- 12I MPC is meeting the agreed upon 365-day limit of 93 ppm and the 7-day limit of 123 ppm for NOx. The refinery has met these limits since November 15, 2005. The refinery has met the 365-day limit of 70 ppm NOx since November 22, 2008.
- 12J A Relative Accuracy Test Audit (RATA) was conducted on the NOx continuous emissions monitoring system (CEMS) installed on the FCCU regenerator exhaust after the ESPs in the exhaust stack on March 27, 2014. The CEM location was moved downstream of the ESPs on March 27, 2014 at the request of the MDEQ. A quarterly cylinder gas audit (CGA) of the NOx CEMS was performed on February 27, 2014 and May 27, 2014. Data collected from the tests was within allowable limits and was submitted to appropriate agencies with the Detroit Refinery's quarterly CEMS reports.
- 12K A RATA was conducted on the CO CEMS installed on the FCCU regenerator exhaust after the ESPs in the exhaust stack on March 27, 2014. The CEM location was moved downstream of the ESPs on March 27, 2014 at the request of the MDEQ. A CGA of the CO CEMS was performed on February 27, 2014 and May 27, 2014. Data collected from the tests was within allowable limits and was submitted to appropriate agencies with the Detroit Refinery's quarterly CEMS reports.
- 12L The Detroit Refinery's Hydrotreater Outage Plan for NOx was approved by the U.S. EPA on November 20, 2007. There have been no Hydrotreater Outages that required usage of the plan during the reporting period.
- 13A MPC installed Ultra-Low NOx burners on the Crude Vacuum Heater and the Crude Alcorn Heater. This was completed ahead of the schedule outlined in the NOx Control Plan. The two heaters have remained below MPC's plan limit of 0.050 lbs/MMBTU since November 15, 2005.
- 13D MPC's corporate office submitted the NOx control plan on March 28, 2014.

- 13G A NO_x CEMS was installed on the combined stack for the Crude Vacuum Heater and the Crude Alcorn Heater, as required. The CEMS analyzer was certified in November 2005.
- 13H A quarterly CGA of the NO_x CEMS installed on the Crude Vacuum and Crude Alcorn Heaters' combined exhaust was performed on January 5, 2014 and April 5, 2014. The CGA accuracy was within allowable limits. Data collected from the tests were submitted to appropriate agencies with the Detroit Refinery's quarterly CEMS reports.
- 13L The Detroit Refinery has not sought a PAL for CO emissions from heaters.
- 14 MPC has incorporated the agreed upon sulfur dioxide (SO₂) emission limits for the FCCU Regenerator into the refinery's Title V Permit number MI-ROP-A9831-2012b.
- 14E/F The Detroit Refinery completed an optimization study for SO₂ adsorbing catalyst additive in the FCCU in July 2005. Intercat Super SO_xGetter II is added with fresh catalyst as required to maintain compliance with emission limits.
- 14G The Detroit Refinery has been in compliance with the FCCU Regenerator's SO₂ limits of 35 ppm on a 365-day average and 70 ppm on 7-day average since November 30, 2005.
- 14I A RATA was conducted on the SO₂ CEMS installed on the FCCU regenerator exhaust after the ESPs in the exhaust stack on March 27, 2014. The CEM location was moved downstream of the ESPs on March 27, 2014 at the request of the MDEQ. Quarterly CGA of the SO₂ CEMS were performed on February 27, 2014 and May 27, 2014. Data collected from the tests was within allowable limits and was submitted to appropriate agencies with the Detroit Refinery's quarterly CEMS reports.
- 14J The Detroit Refinery's Hydrotreater Outage Plan for SO₂ was approved by the U.S. EPA on November 20, 2007. There have been no Hydrotreater Outages that required usage of the plan during the reporting period.
- 15A This paragraph requires that MPC discontinue or reduce burning of fuel oil in its heaters and boilers. For the Detroit Refinery, this included the elimination of fuel oil burning in its CO Boiler. The CO Boiler ceased operation permanently in August 2003 and has been dismantled. No heaters or boilers at the Detroit Refinery currently burn fuel oil.
- 15B MPC's Detroit Refinery maintained compliance, except as outlined in Attachment 3 and as allowed during periods of start-up, shutdown, and malfunction, with the limits established by NSPS Subpart J for the heaters identified in Appendix H, per the schedule listed.

Alternative monitoring plans (AMPs), relevant to heaters and boilers, were approved by U.S. EPA Region 5 for the following streams: FCCU Disulfide Off-Gas, Alkylation Unit Deethanizer Off-Gas, Propylene Unit Deethanizer Off-Gas, Continuous Catalytic Reformer (CCR) Lock Hopper Vent Gas and the CCR Chlorsorb Vent. Our December 2, 2013 Notice of Withdrawal letter to U.S. EPA Region 5 identified withdrawal of the AMPs for the Alkylation Unit Deethanizer Off-Gas and the Propylene Unit Deethanizer Off-Gas as they no longer apply due to physical reconfiguration of the streams. These

streams are now monitored by the existing H₂S continuous monitoring system. The letter also provided notice that the AMPS for the CCR Lock Hopper Vent Gas and the CCR Chlorsorb Vent were no longer necessary as the gas streams are inherently low in sulfur content, meeting the inherently low in sulfur content exemption for monitoring the stream. The AMP for the FCCU Disulfide Off-Gas AMP is still in effect.

- 15C NSPS Subpart J limits and requirements have been incorporated into the Detroit Refinery's Title V Permit (MI-ROP-A9831-2012b).
- 15D As specified in this paragraph, MPC certifies compliance with paragraph 15 of the CD. Please note that refinery heaters and boilers do not burn fuel oil and are in compliance with NSPS Subpart J except as outlined in Attachment 3 and as allowed during periods of start-up, shutdown, and malfunction.
- 16A As specified in this paragraph and in Appendix I of the CD, the Detroit Refinery was required to accept the FCCU NSPS Subpart J sulfur oxides (SO_x) limit as of December 31, 2004. MPC petitioned U.S. EPA to use the existing SO₂ CEMS data plus a 10% correction factor to demonstrate compliance with the NSPS Subpart J SO_x limit. MPC's Detroit Refinery maintained compliance with NSPS Subparts A and J for the FCCU Regenerator since January 1, 2006 except as described during periods of start-up, shutdown, and malfunction.
- 16B As specified by this paragraph MPC began operations of two electrostatic precipitators (ESPs) on December 21, 2004. Periodic stack testing results indicate the ESPs operate below the 1 pound per 1,000 pounds of coke burn as specified. MPC has maintained compliance with the respective particulate limits since December 21, 2004, except during periods of start-up, shutdown and malfunction. Performance testing was conducted during the week of December 9, 2013, with passing results.
- 16C The Detroit Refinery has not sought a PAL for particulate emissions.
- 16D MPC operates a continuous opacity monitoring system (COMS) on the Detroit Refinery's FCCU's exhaust stack.
- 17Aiii There were 5 hydrocarbon flaring events during the reporting period. Corrective actions for the events on January 3, 2014, January 6 – 12, 2014, February 26, 2014 and May 6, 2014 are listed in Attachment 7. The event from June 24, 2014 is still under investigation. The following hydrocarbon events have been closed out since the last progress report: INC-43871 Flooding of Debutanizer Tower Causing Unit Upset (Event date 6/30/2012), INC-48805 Debutanizer, Seal Drum and Preflash Relief to Flare (Event date 5/19/2013), INC-50742 4C-4-B (Offgas Compressor) Tripped Out on Low Water Flow (Event date 10/1/2013).
- 17B At this time MPC has accepted NSPS Subpart J compliance for fuel gas combustion device at the Detroit Refinery for the four flares specified in Appendix A. Routinely generated refinery fuel gas streams that were combusted in these flares either had to be controlled and monitored for hydrogen sulfide (H₂S) or re-routed out of the flare.

For the Unifiner Flare, the only stream that required re-routing was the Unifiner Naphtha Skimmer Vent Stream. A compressor was installed and commissioned such that this vent stream was re-routed out of the flare and back into the process.

For the Alkylation Flare, the only stream requiring re-routing was the Alkylation Unit CDR Vent. A refrigerant purge pump was originally installed and commissioned in order to prevent the CDR from being vented to the flare. During the 2012 turnaround, this pump was replaced with the Depropanizer Charge Pump. The refrigerant is now vented to the Depropanizer Charge prior to being returned to the front of the process. This configuration continues to prevent the CDR from being vented to the flare.

AMPs, relevant to fuel gas combustion devices, were approved by U.S. EPA Region 5 for the CP Spent Caustic Drum, SR Aromatics Sump Vent, SR Recycle Hydrogen, Unifiner Recycle Hydrogen, LPG Railcar Purge Gas, Alky Spent Caustic System, Alky Degassing and Crude Spent Caustic Drum. Data collected pursuant to these AMPs has been included in the quarterly CEMS reports submitted to the MDEQ and U.S. EPA.

Our December 2, 2013 Notice of Withdrawal letter to U.S. EPA Region 5 identified withdrawal of the AMP for the Unifiner Recycle Hydrogen Stream as the source is no longer in service. The letter also indicated that remaining AMPs listed above are no longer necessary to monitor the H₂S in the streams because MRD has installed gas chromatographs that measure the amount of H₂S in the streams as part of the Flare Consent decree.

- 18Aiii As of June 30, 2003, the Detroit Refinery began compliance with the 6BQ compliance option per the CD and the Benzene Waste Operations NESHAP (BWON) regulations.
- 18B The Detroit Refinery did not change its BWON compliance option from 6 BQ to 2 Mg during this reporting period.
- 18E The Detroit Refinery has completed installation and operation of primary and secondary carbon canisters at different stations throughout the refinery. In addition, MPC has developed a monitoring program and completes periodic monitoring of the canisters.
- 18Eii The Detroit Refinery has chosen to monitor the carbon canisters twice a week based on design data.
- 18Eiii The Detroit Refinery monitors carbon canisters twice a week for breakthrough. When this occurs the secondary canister is moved to the primary position and a new secondary canister is installed.
- 18Eiv MPC has a fresh supply of carbon canisters available on-site.
- 18Ev Records documenting carbon canister monitoring and switch outs are kept on-site.
- 18F A review of new benzene waste streams occurs with every Management of Change. Additionally, an annual review for new benzene waste streams takes place when the annual TAB report is compiled. The most recent review was completed in April 2013.

- 18Giii Per this paragraph, MPC is required to conduct audits of laboratories that perform analyses of MPC's BWON samples at least once every two (2) years. During this reporting period, MPC used Catlettsburg's RAD Laboratory and ESC Labs of Nashville for BWON analysis. An audit was last conducted on January 29, 2014 for RAD and on July 30 - 31, 2013 for ESC.
- 18H A procedure has been developed to ensure that benzene due to spills is included in the Detroit Refinery's total annual benzene (TAB) quantity.
- 18Ii Annual training is conducted as required. Details of MPC's training program are included in the quarterly BWON reports.
- 18Iv The only contractors identified that meet the description in this paragraph are LDAR contractors which will perform monitoring and visual inspections of BWON control equipment. Their training is required per paragraph 20 of the CD and is reported in the quarterly LDAR and BWON reports.
- 18J Revised BWON waste/slop/off-spec oil schematics were submitted to appropriate agencies on July 25, 2013.
- 18K As required by this paragraph, MPC originally submitted a proposed end-of-line (EOL) sampling plan to U.S. EPA on October 29, 2003 and was revised and resubmitted on February 9, 2010 and approved on March 8, 2010. MPC began reporting these results in the first quarter BWON reports for 2007. MPC submitted a revised plan on July 25, 2013.
- 18Nii Drains, with water traps, that are subject to BWON or NSPS QQQ control requirements have been included in a program to visually inspect them weekly. All area drains that are segregated storm water drains have been identified and marked per this paragraph. MPC has developed a system to visually inspect, on at least a weekly basis, all conservation vents and indicators on process sewers for detectable leaks and to record the results. If leaks are detected, the vents will be reset.
- 18Oii The Detroit Refinery was not included in the carbon canister study referenced in this paragraph because no carbon canisters have been installed as of January 31, 2002.
- 18Pii Information required to be reported by this paragraph is included in the quarterly BWON reports that are submitted to the MDEQ and U.S. EPA.
- 18Q The Detroit Refinery will submit reports, etc. according to the provisions of this paragraph.
- 19Ai As of June 30, 2003, the Detroit Refinery has completed implementation of actions to comply with the BWON compliance option set forth at 40 CFR §61.342(e).

19Aiii The Detroit Refinery manages and treats all organic benzene waste streams in accordance with the requirements of 40 CFR §61.342(c)(1) and has completed installation of BWON controls.

19Aiv As of June 30, 2003, the Detroit Refinery manages and treats all aqueous benzene wastes in accordance with 40 CFR §61.342(e)(2). In addition, MPC has satisfied the compliance measures specified in 19Aivc as follows:

- (1) A desalter water flash column was installed and commissioned.
- (2) The drain system components in the Melvindale and Crude tank farms have been fitted with controls that meet the requirements of 40 CFR §61.346.
- (3) BWON controls (floating roof) have been installed on Tank 507.
- (4) The aqueous benzene waste from the truck-loading area at the bulk gasoline terminal has been re-routed through a system controlled pursuant to the requirements of 40 CFR Part 61, Subpart FF.

In addition, the Detroit Refinery has initiated programs to complete testing, monitoring, and reporting activities as required by 40 CFR Part 61, Subpart FF. A report certifying compliance with BWON control requirements was submitted to U.S. EPA on August 26, 2003.

20A A written refinery-wide leak detection and repair (LDAR) program has been developed and is updated as needed.

20B Training for the LDAR program is reported on a quarterly basis in the refinery's LDAR reports submitted to MDEQ and U.S. EPA.

20C/D MPC conducted a third-party LDAR audit on March 24 – 28, 2013.

20Ei According to this paragraph, MPC must utilize an internal leak definition of 500 ppm for all valves, excluding pressure relief devices. Currently all valves (except pressure relief devices) are monitored at this lower leak definition.

20Eii According to this paragraph, MPC must utilize an internal leak definition of 2,000 ppm for all pumps. Currently all pumps are monitored at this lower leak definition.

20F The applicable regulatory leak definitions for valves and pumps continues to be used and will be used in the future for reporting leaks at the Detroit Refinery to regulatory agencies. Also, leakers at the lower leak rates are tracked and repaired within 30 days of detection.

20G The Detroit Refinery continues to perform first repair attempts on valves (on which monitoring technicians are able to perform maintenance) leaking at greater than 200 ppm.

20H The Detroit Refinery continues to monitor pumps on a monthly basis and valves on a quarterly basis as required by this paragraph.

- 20I The Detroit Refinery uses GuideWare software as the refinery's electronic database to store LDAR data. MPC continues to use electronic data collection devices during LDAR monitoring as required by this paragraph.
- 20J A program to perform daily QA/QC review of monitoring data was utilized during the reporting period. Quarterly QA/QC reviews of contractors' LDAR data were performed in March 2014 and July 2014.
- 20L The Detroit Refinery continues to use its Management of Change (MOC) program to track the addition of pumps and valves.
- 20Mi The Detroit Refinery continues to use methane as calibration gas for LDAR monitoring equipment.
- 20Mii The Detroit Refinery continues to perform cal drift assessments of LDAR equipment with 500 ppm methane calibration gas.
- 20N The Detroit Refinery has developed programs to meet the "Delay of Repair" requirements in this paragraph.
- 20Niii The Detroit Refinery continues to monitor pumps at 2,000 ppm and perform first repair attempts within fifteen days.
- 20Oib MPC certifies that it uses electronic data collection during LDAR monitoring and is following the manufacturer's recommended operating procedures for dataloggers and/or other electronic devices at its Detroit Refinery.
- 20Oibb The last LDAR audit was conducted pursuant to Paragraph 20C of the CD at the Detroit Refinery on March 24 – 28, 2013. The next audit will be required by March 2015.
- 20Oibc Information required by this paragraph was included in the Detroit Refinery quarterly LDAR reports.
- 20P The Detroit Refinery submits copies of its quarterly LDAR reports to the Michigan Department of Environmental Quality, U.S. EPA and U.S. EPA-Region 5.
- 21 As of the Date of Lodging of the CD, the Detroit Refinery had programs in place for the Sulfur Recovery Unit (SRU) to meet NSPS Subparts A and J.
- 21A There were no periods of time during the reporting period in which the sulfur pit vapors were routed to the atmosphere.
- 21C MPC's updated PMO plan for the SRU was last submitted to the U.S. EPA on September 6, 2013.
- 21E There were 2 tail gas events during the reporting period. Tail gas events occurred on January 6 - 12, 2014 and February 7, 2014. Reports were submitted within the required

timeframe. Tail gas incident INC-53105 Loss of Cooling Tower Pump (Event date 2/7/2014) was closed out within the reporting period.

- 22 There were no acid gas events during the reporting period.

First Revised Consent Decree
Michigan Refining Division
 Attachment 2 - Summary of Appendix R Emissions

1st Half 2014

(average tons/month)

Type of Unit	SOx	CO	NOx	PM
FCCUs	2.32	7.79	3.74	1.78
Heaters/Boilers			3.97	
SRUs	1.74			
Total	4.06	7.79	7.72	1.78

1st Half 2014

Note 1 - Basis of Calculations -	
CEM	Continuous Emission Monitor
PEM	Parametric Emission Monitor
Stk Test	Periodic or Annual Stack Test
MB	Mass Balance
Engr Est	Engineering Estimate
EF	Emission Factor Estimate

NOx Emissions		FIRST REVISED CONSENT DECREE APPENDIX R															1st Half 2014		
Unit ID	Emission Unit	Pollutant Emission Rate																	
		January 2014			February 2014			March 2014			April 2014			May 2014			June 2014		
		lbs/hr	tons/month	basis¹	lbs/hr	tons/month	basis¹	lbs/hr	tons/month	basis¹	lbs/hr	tons/month	basis¹	lbs/hr	tons/month	basis¹	lbs/hr	tons/month	basis¹
11	FCCU	8.03	2.24	CEM	6.25	2.10	CEM	7.50	2.79	CEM	14.79	5.32	CEM	13.95	5.19	CEM	13.40	4.82	CEM
4H1	Crude Vacuum Htr	3.01	1.12	CEM	3.24	1.09	CEM	4.01	1.49	CEM	4.03	1.45	CEM	3.55	1.32	CEM	3.69	1.33	CEM
5H1	Crude Alcorn Htr	6.64	2.47	CEM	7.65	2.57	CEM	8.01	2.98	CEM	7.81	2.81	CEM	6.99	2.60	CEM	7.24	2.61	CEM
EU00147	BT Charge Htr	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS
EU00148	BT Inter Htr	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS	0.00	0.00	OOS

Note 1 - Basis of Calculations -
 CEM Continuous Emission Monitor
 PEM Parametric Emission Monitor
 Stk Test Periodic or Annual Stack Test
 MB Mass Balance
 Engr Est Engineering Estimate
 EF Emission Factor Estimate
 OOS Out of Service

First Revised Consent Decree
Michigan Refining Division
Attachment 3 - Identification of Emission Limit Exceedances
1st Half 2014

Paragraph	Source	Limit	Exceedance Date	Exceedance Hours	Comments
12.I	FCCU	NOx at 93 ppm on a 365-day rolling average and 123 ppm on a 7-day rolling average	None	N/A	There were no exceedances during the reporting period.
13.A.iv	Crude & Vacuum Heater	NOx below 0.05 lbs/MMBTU on a 12 month rolling average	None	N/A	There were no exceedances during the reporting period.
14.G	FCCU	SO2 at 35 ppm on a 365-day rolling average and 70ppm on a 7-day rolling average	None	N/A	There were no exceedances during the reporting period.
15.B	Heaters and Boilers	NSPS Subpart J Fuel Gas limit of 162 ppm on a 3-hour average	1/7/2014 - 1/9/2014, 1/10/2014, 1/11/2014	75 hours (East Plant Fuel Gas)	On the evening of January 6, 2014, the refinery experienced an unplanned shut down of the boiler and several process units. Because of the extremely cold weather, immediate restart of certain process units was not possible. As a result of the shutdown and extended start-up period the H2S concentration in the East Plant Fuel Gas exceeded the 3 hour average.
			3/20/2014	5 hours (East Plant Fuel Gas)	The cooling water pumps on F Cooling Tower in Complex 2 lost suction, resulting in a loss of cooling water supply to the Tail Gas Treating Unit's (TGTU). The loss of cooling resulted in a high amine temperature in the low pressure absorber in the Distillate Hydrotreating Unit (DHT). The high temperature prevented the amine from effectively absorbing H2S from the fuel gas, as a result the H2S concentration exceeded the 3 hour average.
			1/7/2014 - 1/8/2014	16 hours (West Plant Fuel Gas)	On the evening of January 6, 2014, the refinery experienced an unplanned shut down of the boiler and several process units. Because of the extremely cold weather, immediate restart of certain process units was not possible. As a result of the shutdown and extended start-up period the H2S concentration in the West Plant Fuel Gas exceeded the 3 hour average.
			2/7/2014	4 hours (West Plant Fuel Gas)	The SRU was shut down resulting in an H2S concentration in the West Plant Fuel Gas that exceeded the 3 hour average.
			5/4/2014	1 hour (West Plant Fuel Gas)	Process problems.
16.A	FCCU	NSPS Subpart J CO limit of 500 ppm on a 1-hour average	1/7/2014 - 1/10/2014	3 days, 12 hours (84 hours)	On the evening of January 6, 2014, the refinery experienced an unplanned shutdown of the boiler and several process units. Because of the extremely cold weather, immediate restart of certain process units was not possible. As a result of the shutdown and extended start-up period, the CO concentration at the FCCU Regenerator intermittently exceeded the 1-hour average.
			1/25/2014	5 hours	A leak was found on the C3/C4 splitter in the Gas Concentration unit. In order to isolate the leak the Fluid Catalytic Cracking Unit (FCCU) had to undergo an emergency shutdown. During the restart process torch oil was introduced into the regenerator to keep the unit warm per our normal startup procedure.
			6/2/2014	1 hour	Unit adjustments due to process problems on other units.
			6/21/2014	7 hours	Unit adjustments due to process problems on other units.
16.B	FCCU	Particulate Matter at 1 pound per 1,000 pounds of coke burned on a 3-hr average and/or 21% Opacity standard.	1/6/2014 - 1/8/2014	10 hours	On the evening of January 6, 2014, the refinery experienced an unplanned shutdown of the boiler and several process units. Because of the extremely cold weather, immediate restart of certain process units was not possible. As a result of the shutdown and extended start-up period, the ESPs on the FCCU experienced exceeded unit problems and exceeded the opacity limitation.
			2/17/2014	0.3 hours	ESPs tripped due to problems with the FCCU.
21	SRU	SO2 at 250 ppm on a 12-hour average	1/7/2014 - 1/12/2014	5 days (120 hours)	On the evening of January 6, 2014, the refinery experienced an unplanned shutdown of the boiler and several process units. Because of the extremely cold weather, immediate restart of certain process units was not possible. As a result of the shutdown and extended start-up period, the SO2 concentration at the East Plant SRU Incinerator exceeded the 12-hour average.
			1/17/2014	10 hours	The Number 2 TGTU was being started up and warmed. The overhead section of the TGTU 2 was frozen, which prevented the stripper from effectively removing H2S from the amine. As the unit was heating up, the East Plant Sulfur Recover Unit Incinerator SO2 emissions exceeded the 12-hour average.

Attachment 4

Description of Any Problems Meeting Consent Decree Requirements

The refinery's end of line plan for compliance with BWON requirements under paragraph 18K was approved in March 2010. Since the approval, the Detroit Refinery has been concerned with and evaluating methods for taking the monthly Spent Caustic sample as required by the plan. The refinery's spent caustic vessels do not have piping to allow for the collection of a safe sample. The refinery currently has an engineering project to install a sampling station. In addition, the refinery submitted an update to the end of line plan to reflect our current abilities on July 25, 2013.

Attachment 5

Implementation of Environmental Beneficial Projects (SEPs)

The Detroit Refinery has finished the process of renovating Fordson Island. Tanks, piping, and structures have been removed from the island. A Phase I environmental assessment of the property was completed in July 2001. A Phase II environmental assessment of the property was completed and the report was submitted to the Wayne County Department of Environment on June 12, 2003. A pipeline to an alternate terminal has been constructed and has been commissioned. Additional site investigation was performed and a site-specific analysis report was submitted to the Wayne County Department of Environment and the Michigan Department of Environmental Quality (MDEQ) in June 2004.

MPC has been unable to transfer ownership to a governmental or non-profit organization; therefore MPC is maintaining this site as green-space. A letter was submitted to EPA on January 12, 2007 providing notification of this development. Since this date MPC has taken efforts to maintain the site as an undeveloped property for use by local wildlife including migratory birds. The site has restricted access to humans. At this time, MPC has met the requirements and intent of the Consent Decree. MPC has documented evidence of wildlife such as fox and coyote frequenting the island.

Attachment 6

Additional Matters of Concern

There are no additional matters of concern at this time.

Attachment 7

Hydrocarbon, Tail Gas and Acid Gas Incident Status Report

The attached spreadsheet has the on-going corrective actions from Hydrocarbon, Tail Gas and Acid Gas Incidents.

Attachment 7 - Detroit Refinery Hydrocarbon and Acid Gas Status Report

Incident No. or ID	Incident Description	Corrective Action Recommendations	Incident Date	Corrective Action Actual Start Date	Completion Date Target	Actual Completion Date	SO2 Emissions	Status / Comments
42330, 42360, 42392	Tail Gas: GOHT Overhead Stripper Slop to Compressor Intake; High SO2 at the Incinerator; SO2 Exceedence for 12-hour average 250 ppm		3/12/2012		4/26/2012	4/25/2012	SO2 = 885 lbs.	
1	Investigate Preventive Maintenance or replacement of Sult Traps in the short term.			4/26/2012	5/31/2012	5/29/2012		One work order for each sulfur train was written and activated for the operator to remove and inspect the basket and float for all three Sultraps per train, twice per year. The Sultrap internals will be replaced if necessary. Inspection to look at Sultrap piping once the internals are removed. Sulfur Train A - WO 4204969, Sulfur Train B - WO 4204970, Sulfur Train C - WO 4204971
2	Investigate the proper exchanger monitoring frequency based on changing plant conditions.			4/26/2012	Extended to 8/31/12	08/12/12		The cooling tower exchangers are currently being monitored on a more frequent interval that began in May of 2012. This includes monthly temperature surveys, biannual flow studies, and continuous approach temperature monitoring.
3	Investigate and correct the issues with the SRU A Acid Gas Flow Meter and SRU A Tailgas Analyzer.			4/26/2012	SRU A - 4/30/12 SRU B - 11/15/12	10/16/12		Acid gas lines were cleaned during the 2012 SRU A outage. The A train analyzer was replaced during the 2012 SRU A outage. SRU B analyzer was replaced during the fall shutdown.
4	Investigate providing a curve for vent valve position versus air flow to provide guidance for filter change-out.			4/26/2012	Extended until 9/28/2012	9/23/2012		The vent valve is for surge protection and does not indicate plugging filters. The blowers have filter differential indication. The position of the valve does not indicate anything about the health of the filter. There are existing indicators on the 42C1 A/B/C blowers to show when the filters are plugged. The vent valve is for surge protection and does not indicate plugging filters. The blowers have filter differential indication.
5	Investigate amine monitoring frequency and testing based on changing plant conditions.			4/26/2012	Extended until 8/31/2012	08/12/12		Amine monitoring has been reviewed and updates to the operating envelope and Lab targets have been made to get better determination on targets. The current sampling has been reviewed with technologist and determine that current sampling time frame is aligned with industry standards. Projects have been put together for the non critical sample found during the review.
6	Consider installing a vortex breaker on Tk 51 an TK 52.			4/26/2012	Tk 51 - 7/1/12 Tk 52 - Next out of service date	7/2/2012		Vortex breaker was installed on suction nozzle.
7	Investigate routing Sulfur Pit Vapors from the Incinerator to the front of the SRUs.			4/26/2012	12/31/2015	To be completed		OPEN
9	Evaluate the HAZOP Scenario and Alarm rationalization basis for the GOHT Stripper Seam Generator high level alarm.			4/26/2012	12/28/2012 Reopened and Extended until 2/1/2014	10/31/2012 1/21/2014		A PVHH alarm at 95% was added on 1/21/14, per MOC M2014254-001.
8	Consider investigation of the BFW control valve on the Steam Generator			4/26/2012	12/28/2012 Reopened and Extended to 6/30/2013	10/31/2012 6/30/2013		All steam generators have high level alarms that would provide operator notification during an upset that the controls are not keeping up. In that case, the operator should manually take control and close the valve if necessary.
10	Investigate the issues with the Triconics and Honeywell logic and graphics start-up interface			4/26/2012	12/28/2012 Reopened and Extended to 6/30/2013	10/31/2012 6/30/2013		The SO2 and 12hr SO2 tags have Urgent priority alarms at 250ppm that will notify the operator of high SO2. The instantaneous SO2 tag has an earlier Low priority alarm at 150. These tags are on several graphics including Incinerator L2&L3, CEMS L3, SRU L2 and the L3's of every train.

Attachment 7 - Detroit Refinery Hydrocarbon and Acid Gas Status Report

Incident No. or ID	Incident Description	Corrective Action Recommendations	Incident Date	Corrective Action Actual Start Date	Completion Date Target	Actual Completion Date	SO2 Emissions	Status / Comments
43871	Hydrocarbon Flaring: Flooding of Debutanizer Tower Causing Unit Upset		6/30/2012		8/14/2012	8/13/2012	SO2 = 5,771 lbs	
	1	Preflash Tower Level Indication did not accurately measure liquid level in the Preflash Tower. The level indication should be evaluated to determine the best available technology for the service. The Marathon Petroleum Instrumentation Technologist should be consulted in selecting the technology.		8/10/2012	12/31/2012	12/20/2012		Replace the Rosemount 3051 transmitters on the pre flash column with Vega AMERICAS radar transmitters.
	2	All operating personnel and the Tech Service Engineers should attend Abnormal Situation Training. Included in the training should be a review of recent incidents and the decisions made during the event. In the class, we should continue to reinforce the plant-wide requirement that anyone can question whether operation should continue or whether the unit should be taken to a stable or shutdown state.		8/10/2012	12/31/2013 Extended to 6/30/2014	05/13/14		Training was conducted and all affected employees have received MAS Training.
48805	Hydrocarbon Flaring: Debutanizer, Seal Drum and Preflash Relief to Flare		5/19/2013		7/3/2013	7/3/2013	SO2 = 4,442 lbs	
	1	Redesign autotransfer system to trigger on line-to-line voltage. The auto transfer systems need to be simulated before being enabled at the refinery.		6/24/2013	12/20/2013 Extended to 6/6/2014	7/15/2014		Simulation testing has been completed. It has been determined an outage on the substation is required to allow a field test of the installed program. A notification has been written, #10511281, to be completed during the 2018 TAR. This Notification is to install and test the system in the following substations: NC2, NVS, BOI, OAK, BAS, and NHT substations.
	2	Install a satellite clock in the North Vacuum Substation so that all relays are synchronized.		6/24/2013	1/11/2014 Extended to 1/31/2014	1/27/2014		The satellite clock was installed in the 5kV switchgear line up by 1/13/2014. It is powered up and connected to the antenna. It is also connected to the SEL 2030 comm unit in the 5kV switchgear line up. It must still be connected to medium voltage switchgear and medium voltage motor control centers. Clock was connected and item closed on 3/28/14.
	3	Modify SEL 701 motor protection relay programming so that faults will be captured by electricians during substation preventative maintenance. This is already being done for newer relays.		6/24/2013	11/1/2013 Extended to 3/25/2014	4/10/2014		Logic change is not possible with the SEL 701 Motor Management Relays. High resistance ground (HRG) should be looked at first by the electricians. If a ground fault is discovered, electricians can verify reading in the relay.
	4	Develop one page "critical steps" checklist for emergency shutdown procedure and incorporate key steps that can result in additional lost opportunity if missed.		7/10/2013	10/31/2013	11/19/2013		Emergency Procedure completion will require a review of each step of the procedure within two hours of completion to ensure all steps were completed because all steps are considered "key steps".
	5	Initiate engineering project to install pressure controlled spillback around desalted crude pumps, to prevent nuisance trips of crude preheat pressure protection HIPPS during startup or reduced rate operation.		7/10/2013	8/30/2013	8/29/2013		HIPPS Trips, at low charge rates causing loss of power to desalter grids, and water carry over. Initiate engineering project to install pressure controlled spillback around desalted crude pumps, to prevent nuisance trips of crude preheat pressure protection HIPPS during startup or reduced rate operation.
	6	Align MRD's pump switching philosophy with other Marathon sites, in an effort to ensure system reliability, and potentially mitigate release magnitude in the event of a power failure.		7/10/2013	9/15/2013	9/18/2013		Assessed the switching philosophies at other MRD Refining Divisions, compiled the information and provided it to John Jordan.

Attachment 7 - Detroit Refinery Hydrocarbon and Acid Gas Status Report

Incident No. or ID	Incident Description	Corrective Action Recommendations	Incident Date	Corrective Action Actual Start Date	Completion Date Target	Actual Completion Date	SO2 Emissions	Status / Comments
50742	Hydrocarbon Flaring: 4C-4-B (Offgas compressor) tripped out on low water flow.		10/1/2013		11/15/2013	11/8/2013	SO2 = 3076 lbs	
	1	Add 04LV0930 valve feedback position to DCS screen		11/8/2013	12/31/2013	12/10/2013		Allow operators to view valve set position and valve field position on operating screen. Feedback from 04LV-0930 added to DCS screen U04B5.
	2	Add a low low level alarm to 4V37 Separator level control transmitter 04LT0930. Discuss low low level point with Jim Farris.		11/8/2013	12/31/2013	12/17/2013		The low level alarm at 32.8% is considered too high to instill a sense of urgency for the operators to respond. It is recommended to lower the low level alarm. Alarm on 04LC0930 changed to 15%. Per MOC M20136015-001.
	3	Complex Supervisor to review Vacuum Unit offgas compressor shutdown incident with all complex operations personnel including troubleshooting that should have occurred. Review operation of the offgas compressors.		11/8/2013	12/31/2013	12/2/2013		The information on the loss of level and loss of water flow on the 4C4 incident was covered with all complex 1 employees.
	4	Make a recommendation on standardizing the alarm summary management system across the refinery's operating units.		11/8/2013	12/31/2013	12/27/2013		This was discussed with the process specialists at their last two meetings. It was decided that this needed to be done. All agreed that the board operators needed to review ALL alarms twice a shift to ensure that no critical alarms were missed. Separate recommendations were made to all Specialists to train their PCOs in this policy. PCG will develop the training on the "how to" part of this task. See R20132378-001 through -007
	5	Configure 4V37 Separator level transmitters 04LT0930 and 04LI0932 to have their 0 and 100% levels to be inside the Separator level transmitter taps.		11/8/2013	1/30/2014	1/30/2014		Range of the radar is configured to be the same as the DP as originally intended by the design. The 0 and 100% points are now in the measureable range of the transmitter and it appears to be tracking the control level.
	6	Configure a DCS deviation alarm between the Separator level control transmitter (04LT0930) and shut down indication level transmitter (04LI0932). Deviation point to be determined with Jim Farris.		11/8/2013	12/31/2013	12/6/2013		Deviation tag exists in the DCS between 04LI0932 and 04LI0930. Tag is designated 04UA2002. A high level high priority alarm is set on 04UA2002 at 4%. Printout from DCS is attached
52648	Hydrocarbon Flaring: GOHT Recovery Header Freeze		1/3/2014		2/17/2014	2/17/2014	SO2 = 27,946 lbs.	
	1	Install pressure reading of 8V20 Recovery Discharge KO Pot to Central Control Building.		2/17/2014	10/30/2014	To be completed.		OPEN
	2	Conduct refresher training with all personnel and supervision on radar exceptions.		2/17/2014	7/11/2014	To be completed.		OPEN
	3	Reliability to determine and implement appropriate freeze protection on line.		2/14/2014	10/30/2014	To be completed.		OPEN
	4	Temperature wrap line and heat trace to provide adequate freeze protection.		1/3/2014	2/18/2014	2/17/2014		Line was temp wrapped and traced to provide adequate freeze protection.

Attachment 7 - Detroit Refinery Hydrocarbon and Acid Gas Status Report

Incident No. or ID	Incident Description	Corrective Action Recommendations	Incident Date	Corrective Action Actual Start Date	Completion Date Target	Actual Completion Date	SO2 Emissions	Status / Comments
52344, 52317 and 52360	Hydrocarbon Flaring and Tail Gas Incident: Refinery Wide Loss of Instrument Air (INC-52344), Incinerator Tripped High SO2 (INC-52317) and Flaring Seal Drum (INC-52360) - POLAR VORTEX		1/6 - 12/2014		2/26/2014	2/26/2014	Total SO2 = 3,472 lbs. Combined Hydrocarbon Flaring (1,668 lbs.) and Tail Gas Incident (1,804 lbs.)	
	1	Upgrade heater and/or install insulation on 76C101A/B lube oil systems to maintain temperatures above the permissive.		3/3/2014	12/1/2014	To be completed.		OPEN
	2	Adjust local and add a DCS low lube oil temperature alarm of 90°F.		3/3/2014	4/1/2014	4/1/2014		DCS low lube oil temperature low alarms were added as part of the instrument air compressor rationalization. Please refer to M20141422.
	3	Properly winterize 76C101A/B suction and discharge systems. This may include insulating and tracing pipe and adding freeze protection to the filter housing.		3/3/2014	12/1/2014	To be completed.		OPEN
	4	Update all unit procedures for loss of instrument air. Complete procedure for nitrogen backup and associated training. One overall procedure should be made for the shift supervisor.		3/3/2014	9/1/2014	To be completed.		OPEN
	5	Change low range of suction TI from -10°F to -100°F.		3/3/2014	3/15/2014	3/14/2014		Temperature has been correctly set in field to -100 deg F
	6	Create checklist of 76101A/B instrument settings. Verify settings if future logic work is performed		3/3/2014	9/30/2014	To be completed.		OPEN
	7	Install boiler instrument air backup 6 pack of air cylinders to allow control with loss of instrument air.		3/3/2014	11/1/2014	To be completed.		OPEN
	8	PCG shall increase the span of 12PC0400 to allow operation in all operating scenarios and provide an alarm if the controller is automatically changed to manual. Coker configuration and other MPC applications should also be evaluated for similar configurations.		3/3/2014	9/1/2014	To be completed.		OPEN
	9	Upgrade DEB overhead water boot instrumentation to prevent future failures.		3/3/2014	5/1/2015	To be completed.		OPEN
53105	Tail Gas Incident: Loss of F Cooling Tower Pump		2/7/2014		3/24/2014	3/21/2014	SO2 = 750 lbs.	
	1	Put Cooling tower low pressure alarm back into service.		2/8/2014	3/28/2014	3/28/2014		The cooling tower alarm has been re-enabled on the DCS. The alarm will be allowed to annunciate to the board operator.
	2	CSR will add a standard alarm block to all indicators going forward. This will eliminate the field bus configuration and will allow standardization of alarming.		3/13/2014	3/30/2015	3/30/2014		The alarm block has been added to all indicators for the CSR project.
	3	CSR will verify that alarm settings for each existing field bus device are properly configured.		3/13/2014	5/15/2014	3/31/2014		All transmitters that have been previously migrated have been verified to have their alarms enabled.
53434	Hydrocarbon Flaring: Loss of Level in GOHT Separator		2/26/2014		4/12/2014	4/11/2014	SO2 = 6,435 lbs.	
	1	Replace 08LV0182 with Masoneilan 77000 valve that is better capable of handling extreme service.		3/10/2014	12/1/2014	To be completed.		OPEN

Attachment 7 - Detroit Refinery Hydrocarbon and Acid Gas Status Report

Incident No. or ID	Incident Description	Corrective Action Recommendations	Incident Date	Corrective Action Actual Start Date	Completion Date Target	Actual Completion Date	SO2 Emissions	Status / Comments
54571	Hydrocarbon Flaring: Loss of Level in GOHT Separator		5/6/2014		6/20/2014	6/18/2014	SO2 = 1,160 lbs.	
		Review and improve the work flow process to ensure proper communication of instrument specifications to manufacturer/re-build contractor. As an example, when an existing control valve is being modified, highlight or bold the changes on the spec sheet so the valve contractor can easily identify them.		6/18/2014	12/1/2014	To be completed.		OPEN
		Correct the nameplate for 08LV0182 to show proper bench range for springs. 08LV0182 springs have been changed to the correct bench range (11-23 psi) but the nameplate still says 3-15 psi.		6/18/2014	6/30/2014	6/26/2014		A work notification was entered to correct the nameplate. The work was planned, scheduled and completed.
		Update spec sheet for 08LV0182 to show proper bench range for springs. 08LV0182 spec sheet shows 11-34 psi range...should be 11-23 psi.		6/18/2014	6/30/2014	6/30/2014		Spec sheet has been updated. Revision 3.
		Develop a process to ensure that control valves returned to MRD after rebuild (or new) are QC-checked against their specification sheet.		6/18/2014	12/1/2014	To be completed.		OPEN
		Develop contingency plan for sudden GOHT unit pressure decrease/feed surge.		6/18/2014	7/15/2014	To be completed.		OPEN
134685	Hydrocarbon Flaring: NHT overpressure/disruption in flare operation		6/24/2014		8/8/2014		SO2 = 558 lbs.	